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ABSTRACT

This paper discusses comparisons of student comments and analysis of comments from a face-to-face course with Web-enhancements, a video-based, hybrid course with Web-enhancements and a Web-based course. In order to provide student problem-solving participants both individual and personal experiences (and attitudes) concerning the use of course discussion boards, an assignment was designed to teach students the fundamentals of discussion board use in combination with a course assignment. In all three course delivery formats (face-to-face, video-based/hybrid and Web-based), course materials and communication tools were provided, using the WebCT course management program. Results are summarized for each step in a five-step problem-solving process that is a variation of reflective thinking, including: defining the problem; analyzing the problem; determining criteria; generating solutions; and evaluating solutions. Suggestions are offered for maximizing student preparation, involvement, learning and satisfaction with a course discussion component. (MES)

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# Student Recommendations for Discussions Boards: Conclusions of Student Problems

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Eighth Annual
Mid-South Instructional Technology Conference
Teaching, Learning, & Technology
The Challenge Continues
March 30-April 1, 2003

# 2003 Conference Proceedings

# Student Recommendations for Discussions Boards: Conclusions of Student Problems

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Track 1 - Effective Technology Based Learning Environments
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## Abstract

Course discussion boards provide for previews, ongoing discourse, summaries and tools to extend discussion beyond the classroom. They also provide opportunities for replication of in-class discussions in a virtual classroom.

Asking what students recommend for discussion board-use, in addition to comparing comments, based on delivery format is useful. Comparisons of student comments and analysis of comments from a face-to-face course with web-enhancements, a video-based, hybrid course with web-enhancements and a web-based course will be discussed.

## Proceeding

Course delivery formats (and course management programs) may vary from institution-to-institution. However, three (3) course delivery formats are common approaches in higher education institutions:

1. A "face-to-face" course, often referred to as a "traditional" or an "on-ground" course, is one which meets regularly throughout the quarter or semester. Course meetings may be once, twice or three times weekly, or more often for accelerated courses (courses meeting during a "mini-term," a five-, eight-

or ten-week summer term, for example).
2. Video-based/hybrid (or CD-ROM-based) courses include a series of videotaped lessons (lectures, for example) to supplement the traditional course reading materials. This course format requires students to meet, at least once (for an orientation) and up to, as many as, four or five times during a term.
3. Web-based courses usually have no meetings in a face-to-face setting. Variations on this delivery format do exist. For example, some instructors may require a "beginning of the course" orientation meeting or a pre-course orientation for distance students (an institution-sponsored orientation). Course materials may include videotapes (and/or CD's) as additional course materials or as materials to supplement course content normally contained in textbooks and other supplementary reading material.

A course discussion feature can be used to supplement or extend classroom discussion, regardless of the course delivery format being utilized, whether a face-to-face course, a video-based/hybrid course or web-based course. Discussions provide a vehicle for student-to-student interaction, often with a students-to-instructor interaction component. The use of a class discussion feature is a common instructional approach in a variety of courses and can be easily integrated into a course, along with other instructional approaches. In addition to lecture, lab experiences, case studies and other instructional approaches, student-to-student interactions can extend discussion of course topics beyond the classroom and/or present alternatives to lecture. Student interaction in pairs or small groups can enhance the learning experiences of all participants.

In face-to-face classrooms, discussions might be conducted between pairs of students, within small groups or by and between members of the entire class. The content of the discussion may remain "private" (shared among the discussants only) or may be "public" (shared with other members of the class). The choice between private and public is an instructor-choice. Discussion may extend "beyond the classroom" to additional student meetings. Computer-mediated discussion can be arranged to provide for the "private vs. public" discussion approach.

In a video-based class face-to-face meeting, pairs or small groups of students may conduct discussion between themselves with an instructor moving from pair or group to the next pair or group to analyze or offer guidance. The instructor may choose for pairs or groups to "share" their observations, findings, analysis or answers with the entire class. As with a face-to-face format, students in this meeting format may be asked to meet together at other times. Again, computer-mediated discussions allow the instructor to "join" a discussion as needed.

With a web-based course format, discussion among pairs or groups of students is replicated by using the discussion feature. In order to replicate face-to-face discussion, students are assigned a "Presentation Group," an approach where discussions of student groups (or pairs) are managed by an instructor. Discussion board messages may be private (only viewable between group participants and instructor) or public (open to review by all members of a class, including the

instructor).

Discussion "challenges" can occur when discussion moves outside a physical classroom. Project teams (or pairs) can meet at designated times or "flex times" (times can be arranged between students to fit the student participants schedules). Outside-class meetings extend the learning experience beyond the scheduled meeting times "in class."

Students may, however, find it difficult to schedule mutually agreeable meeting times for a variety of reasons. Married students and single parents have family responsibilities. Working students' schedules can create conflicts. Class schedules create conflicts. Campus activities and commuter time are additional roadblocks.

Even though outside-class physical meetings are arranged for student teams, faculty members cannot easily guide or facilitate student discussion outside a standard classroom or other pre-designated site or location. The time constraints related to monitoring the activities of many groups meeting during the week will make it difficult, at best, for an instructor to consider scheduling meetings with student groups. An alternative method to "meet" with groups to facilitate student discussion is beneficial to, both students, and instructor. A computer-mediated discussion is an alternative.

Use of a web-based discussion feature can be beneficial for different course delivery formats. Valuable "in-class" meeting time for "face-to-face" courses or meetings is maximized when a computer-mediated discussion component is added to instruction. Finite blocks of time and limited meetings in video-based/hybrid courses are better utilized with computer-mediated discussion. Finally, web-based courses can better replicate class discussion with a computer-mediated discussion feature.

In all three formats, online discussions supplement and extend classroom "discussion." An additional advantage can include a permanent record of the "discussion," a valuable resource for instructor analyses.

Two common course management programs at institutions are WebCT and BlackBoard. Both have discussion board features. In addition, institutions may have some instructors who choose to use Microsoft FrontPage software (or some other web-authoring software) to develop a "course" which includes a discussion feature. With the approaches and software noted above, a discussion features are integrated into courses and used as, both instruction and communication tools.

An online discussion feature can be available for all three delivery formats, as noted above. Using an institution's course management program for course delivery, such as a WebCT or BlackBoard program, enhances courses by offering additional opportunities to engage students in discussion. If either program, or a similar program, is not available, separate web-authoring programs are available

for the task, such as Microsoft FrontPage.

PRELIMINARY PLANNING:

In order to encourage students to use an electronically-mediated discussion feature in a course, the instructor will find it useful to develop perspectives concerning student motivations. Students may not willingly use the discussion feature provided for a course.

1. Since three distinct course delivery formats (face-to-face, video/hybrid and web-based) were to be considered, student input was expected to be gathered from classes representing the three formats. Comparisons to find similarities and differences between students enrolled in classes with different formats was considered.

   A course discussion feature, as a communications tool, could be an integral part of courses with distinctly different delivery formats. A course management system (like WebCT) can provide this opportunity

   A decision was made to gather input from students enrolled in a face-to-face course(s), a video-based/hybrid course(s) and a web-based course(s).

   Further, another decision was made to gather student input from the same term or back-to-back terms in order to minimize differences (courses often entail instructor or text modifications from one term to the next).

   Student input came from one term, with a repetition (to check perception) the following term.

2. Student perspective on the use of class discussion boards should be similar. In the broadest view, students who had the same learning experiences in a course would help to "level out" differences between student observations from different sections than if the student respondents came from different courses. The same or similar courses were necessary to maximize similarities in student course perspectives.

   The chosen course was a general education required course, Fundamentals of Speech Communication, a freshman level course. Course delivery uses all three of the course delivery formats previously mentioned. Chosen for this study were course sections from each of the three delivery formats. A "follow-up" inquiry was completed the next term, using an additional face-to-face and a video-based/hybrid section.

   The Fundamentals of Speech Communication course was especially useful because this "hybrid" course includes a unit on group communication with a problem-solving emphasis, in addition to

interpersonal communication and public address units. The problem-solving topic suggested an evaluation approach for the students to consider discussion board-use: the course assignment for this group of chapters (group process and problem-solving) might address the use of discussion boards.

3. Besides the same or similar courses, the approach to discovering student viewpoints should be the same or similar evaluation approach in all classes.

   The Student Evaluation of Instruction (in addition to course Peer Reviews), and conducted by most institutions (in some fashion) each quarter or semester is a useful planning and evaluation tool for the instructor. These evaluations, usually scaled-question surveys of student opinion (and written comments), provide instructors valuable information to analyze student perspectives for course modifications. In short, Student Evaluations of Instruction ask the students the question: "what works for you?"

   A decision was made to find some variation of a broad-based survey of students to better gauge attitudes, and to find what features of discussion board-use would be encouraging and/or supply motivation for student-use. As noted above, the problem-solving approach presented in the Fundamentals of Speech Communication text provided a usable framework for the students to consider discussion board-use.

   Student problem-solving groups discussed the following problem: "What should be done to encourage student use of a course discussion board?"

4. Student feedback should be free of constraints. If the students' evaluations are a "serious" undertaking, the assignment or "evaluation" should be presented in a manner so students would not feel compelled to give what they perceived to be the "correct" observations. When students supply their input, they should not feel their answers affect their course grades.

   A decision to "require" the completion of the steps in the problem-solving process resulted. Students recorded their input for each step in the problem-solving process for the instructor. For student evaluation (and a grade), individual students completed a separate set of assignments to evaluate the discussion process itself (leadership aspects, participant roles, et. al.).

PROCEDURES:

In order to provide student problem-solving participants, both individual and personal experiences (and attitudes) concerning the use of course discussion boards, an assignment was designed to teach students the fundamentals of

discussion board use, in combination with a course assignment. In all three course delivery formats (face-to-face, video-based/hybrid and web-based), course materials and communication tools are provided, using the WebCT course management program.

1. A "Self-Introduction" assignment was created to afford students the opportunity to learn to post to a specific topic, reply to messages and to post additional topics on a course discussion board. Students were given step-by-step directions for each of the phases of the assignment.

   In the initial phase, the student assignment required posting of an individual self-introduction on the discussion board while following the assignment guidelines. The assignment requirements included three fully developed paragraphs concerning themselves. Students received twelve suggested categories of information, from which to choose, in order to write a self-introduction: skills, abilities, knowledge, competencies, personality, cultural background, their environment, influential acquaintances, experiences, activities, work, goals or values.

   In the second and "follow-up phase," students wrote replies to, at least, three other members of the class. Students answered three questions for each reply: (a) What do you and I have in common? (b) What do you admire about the person you are replying to? and (c) What other information/areas would you like to discuss?

   Students learned the basic operation of the discussion board with this assignment: selecting a topic to read messages, opening and reading a message posting, replying to a message, reading replies and replying to message replies.

2. Once students had a working knowledge of discussion board basics, including interpersonal experiences, an explanation of a 5-step problem-solving process was provided. Students read the textbook explanation and listened to the instructors lecture on the steps (and/or read online posted lecture notes) in the web-enhanced, video-based/hybrid course and web-based course sections.

   The five-step problem-solving process is a variation of Reflective Thinking:

   Step 1: Defining the Problem entails defining unclear terms (in addition to other requirements)

   Step 2: Analyzing the Problem directs discussants attention to problem causes, effects and the degree of "hurt" or damage caused by the problem.

   Step 3: Determining Criteria seeks to discover standards a working

solution would meet, based upon the causes identified in the previous step.

Step 4: Generating Solutions invites the participants to list as many solutions as possible, without any pre-judgments, pre-judgments related to feasibility, for example.

Step 5: Evaluating Solutions invites participants to examine each solution against the criteria identified in Step 3, in order to recommend a solution or combination of solutions that will solve the problem.

3. The instructor created multiple discussion groups, using WebCT "Presentation Groups," for each course section. The "private topic" feature choice was selected for each discussion team. Although topics for discussion teams may be public or private, the instructor decided to utilize the private feature in order for group members to work independently of other groups. The private feature does not allow other members of class to read the discussion messages of other groups, although the instructor can monitor the group process of individual groups.

   Groups consisted of five to seven members, depending on the section enrollment. Student mid-term course averages established group membership. The objective was an equalization of the course grade point average for each group. A rank order of course averages identified students in order to make team assignments.

   For each Presentation Group, five discussion topics (including annotated directions) were posted on the discussion board, with each topic representing one of the five steps in the problem-solving process.

4. Student groups had two weeks for completion of the 5-step un-graded problem-solving phase and an additional week to complete the graded analysis of the discussion process assignment.

RESULTS:

1. Define the Problem ("What should be done to encourage student use of a course discussion board?")

   All student discussion groups (the face-to-face, web-enhanced sections, the video-based/hybrid, web-enhanced sections and the web-based, "online" section) chose the term "encourage" to define. Among other directions for Step 1, groups were required to identify and define one or more terms, terms that may be subject to multiple interpretations (definitions).

   All groups chose one of the two "definitions," while some groups used

both definitions. To "encourage" meant either "to provide some motivation" (to students), or "to provide/create a desire" (for or among students). At this early stage in the discussions of the various groups, it appeared that students were focused on some form of an "incentive" as necessary for encouragement. Observing the discussion messaging, I regularly noticed comments, related to encouragement, which mentioned, grades, "interesting," and "fun." There was no appreciable difference between student groups within a course section or between the different course delivery formats.

2. Analyze the Problem

At this step, the direction of group discussant attention is toward the problem's causes, effects and/or the degree of "hurt" or damage caused by the problem at this stage. Patterns began to become clear with this step. A grouping of causes becomes apparent and differences between student discussions groups representing different delivery formats began to appear.

"Technical or Access" causes identified by the various groups included: slow internet connections, competing home users, ADA-compliance, can't type or slow typist, fear of a computer virus and no home access to the internet or no internet-connected computer.

Not surprisingly, these were concerns of the face-to-face course groups, with only the "slow connection" being mentioned by only one of the video-based/hybrid or online groups.

"Training" causes identified by the groups included: no knowledge of discussion board-use, "don't like" computers, no previous coursework, instructions are not clear and do not use the WWW and/or internet-connected devices.

Again, these were issues raised by the face-to-face groups almost exclusively, with only two video-based/hybrid course groups mentioning "directions" as an issue.

"Course Incentive and/or Disincentive" causes identified by the groups included: lack of required assignments for discussion board use, no course incentives for use, boring assignments, no motivations for discussion-use, lack of interesting topics, lack of personal commitment to the class and a lack of motivation to participate in the class discussion.

Primarily, the video-based/hybrid course discussion groups identified the above-listed causes. Required assignments and course use incentives were shared by the online groups, while lack of personal commitment and motivation were shared by face-to-face groups.

"Personal Issue" causes identified by the groups included the following: too time-consuming, inconvenient, plenty of distractions in daily lives and other personal concerns.

There was no appreciable difference between the face-to-face, video-based/hybrid groups and the online groups. All student groups identified at least two of the four causes. However, some groups from the video-based/hybrid and the online sections mentioned all four of the causes. A possible explanation might be that "distance" students have obligations in greater numbers than students enrolled in traditional, face-to-face courses.

Interpersonal Communication causes identified by the student groups included: don't know members of the class, find it hard to relate to people outside a face-to-face meeting, non-social/not a "group" person, shyness, some people are "private," fear of rejection for differing views, fear of offending others, don't want to reveal a lack of knowledge by asking questions, do not want to be first and appear to be a "know-it-all," fear of rejection/not being accepted and fear of judgments by the group members based upon spelling or grammatical errors.

Regardless of course delivery format, each student discussion group identified virtually all of the above "Interpersonal Causes." This area of concerns appears to be the primary area of focus for instructors. As opposed to training, personal issues, course content and instructional approaches, the majority of the students in this short study shares the "classroom climate" concerns.

3. Determine Criteria

At this stage, after having examined possible causes of the problem under consideration, student groups worked to establish criteria that a workable solution should meet, if implemented. The same five "areas," as listed under Step 2, are used to organize student group comments for Step 3.

The number of individual student groups listing a single criterion is used to rank the criteria on a one-to-five scale. In order of most-to-least criteria mentioned are grouped within the following categories: (1) Interpersonal Communication, (2) Course Incentives, (3) Training, (4) Personal Issues and (5) Technical or Access criteria.

1. Interpersonal Communication criteria included: (a) the environment should be non-threatening by being a non-critical environment, (b) students should become familiar with each other early in the course and (c) there should be adequate time to become acquainted before discussion assignments begin.

2. Course Incentive criteria included: (a) assignments should be interesting and/or fun, (b) assignments should be for course credit or extra credit and (c) deadlines should be clearly stated and spread equally throughout the term.

3. Training criteria included: (a) directions for discussion use should clear and easy to complete and (b) training and/or directions for basic www or course navigation should clear and minimal

4. Personal Issue criteria included: (a) assignments should not be time-consuming and (b) assignments should allow for flexibility, i.e., timeframes for completion.

5. Technical or "Access" criteria included: Provisions should be made (or announced to students) concerning on-campus internet-accessible computer resources.

4. Generate Solutions

At this step in the problem-solving exercise, student groups identified possible solutions for the problem, apart from a consideration of the criteria previously listed. In order of most-to-least, solutions mentioned are ranked within the following categories: (1) Interpersonal Communication, (2) Course Incentives, (3) Training, (4) Personal Issues and (5) Technical or Access criteria. The numerical quantity of solutions generated by student groups, by category, mirrors the rank order of the numerical quantity of criteria generated by student groups in Step 3. The top twelve, most mentioned solutions are listed, by category:

1. Interpersonal Communication solutions included: (a) mandatory class groups, (b) assign students to groups on the first class day, (c) create a "buddy system," (d) provide for social interaction, apart from assignments and (e) provide for a "meet and greet" or introduction assignment.

2. Course Incentive solutions included: (a) regular, graded assignments, (b) provide for extra-credit assignments, (c) provide for weekly deadlines, (d) assignments should not be time-consuming online and (e) structured, "debatable" topics of interest to students or topics related to student lives should be included.

3. Training solutions included: (a) provide step-by-step directions for discussion board use and completion of assignments and (b) provide "user-friendly" simple directions.

Personal Issue solutions and Technical or "Access" solutions were mentioned by one or two student discussion groups only and were not considered.

5. Evaluate Solutions

At this final stage in the process, student groups were asked to choose a minimum of three, up to a maximum of five solutions for evaluation. While applying criteria previously agreed upon by the student group, one solution or a combination of solutions was to be selected for recommendation.

In order to encourage student use of a course discussion board, the student groups recommended the following:

1. Students should be assigned to a team early in the course. A "buddy system" of partners is recommended for implementation and team membership should be rotated during the class term.

2. Discussion assignments should be chosen that students will find "interesting."

3. Efforts should be made to insure that computer access is available for the most days and number of hours possible.

4. Provisions should be made to provide extra credit for discussion participation.

5. Discussion directions should be clear with training provided in a lab.

6. Participation in discussions will be a required assignment.

CONCLUSIONS:

Faculty members have an opportunity to (1) extend classroom discussions beyond the classroom, (2) an opportunity to replicate classroom face-to-face classroom discussion in distance courses, and (3) an opportunity to provide a "student-engaging" component in courses, by using a web- based discussion component.

This limited study suggests directions for maximizing student preparation, involvement, learning and satisfaction (with a course discussion component) by:

- Designing a, non-threatening, assignment for discussion board-use (an approach that anticipates simple directions or scheduled "hands on" training opportunities)
- Assignments should be designed to allow student completion within a "window" of time (hours and days) that the institutional facilities are available is "open."
- Course credit should be earned for required discussion assignments and

consideration should be given for "extra course credit," as an option.

- A concerted effort to design a discussi9n feature, which would engage students by linking discussi9hn topics with students personal lives should be a primary concern.
- Finally, faculty members should design an approach that creates a non-threatening "classroom" climate that "partners" students early in the term.

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